

**50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposal to Determine Endangered Status for the Shortnose Sucker and the Lost River Sucker**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine endangered status for the shortnose sucker (*Chasmistes brevirostris*) and Lost River sucker (*Deltistes luxatus*), fishes restricted to the Klamath Basin of south-central Oregon and north-central California. Dams, draining of marshes, and diversion of rivers have reduced the range and numbers of both species by more than 95 percent. This action would implement the protection of the Endangered Species Act of 1973 for these two fish. The Service seeks relevant data and comments from interested parties on this proposal.

**DATES:** Comments from all interested parties must be received by October 26, 1987. Public hearing requests must be received by October 13, 1987.

**ADDRESSES:** Comments, hearing requests, and materials concerning this proposal should be sent to the Regional Director (FWE-SE), U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 NE Multnomah Street, Portland, Oregon 97232. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Mr. Wayne S. White, Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 NE Multnomah Street, Portland, Oregon (503/231-6131 or FTS 429-6131).

**SUPPLEMENTARY NOTES:****Background**

Cope (1879) originally described the shortnose sucker (*Chasmistes brevirostris*) and Lost River sucker (*Deltistes luxatus*) from Upper Klamath Lake, Oregon. Later during the 1800's, Gilbert (1898) and Evermann and Meek (1898) described two other species of *Chasmistes* from the same lake. A careful review of all available specimens, however, documented that *brevirostris* is the only valid species of *Chasmistes* from Upper Klamath Lake and that the other two "species" were merely sex or condition variants of *brevirostris* (Miller and Smith 1981).

The Lost River sucker was originally placed in the genus *Chasmistes* by Cope (1879). *Deltistes*, monotypic genus, was erected for the Lost River sucker in 1896 based on the delta-shaped gill rakers (Seale 1896). In addition to the deltoid, short gill rakers, the Lost River sucker is characterized by subterminal mouth, small hump on the snout (at least in preserved specimens), and large size of adults (ca. 10 lbs.). The primary morphological characters that distinguish the shortnose sucker from other species of *Chasmistes* include the presence of a terminal, oblique mouth with weak or no papillae on the lips. Scales are small, with 65 to 79 in the lateral line and 21 to 25 around the caudal peduncle (Miller and Smith 1981).

The Upper Klamath Lake and its tributaries are now the primary refuge for both the Lost River and Shortnose suckers. Remnant or highly hybridized (hybrids are not protected under the Endangered Species Act per 1983 Solicitor's Opinion) populations of these two species occur in the Lost River system and other nearby areas.

In addition to Upper Klamath Lake and its tributary streams, shortnose suckers and Lost River suckers have been collected from Copco Reservoir, California (Coots 1965, Moyle 1976), Boyle Reservoir, Oregon (Jeff S. Ziller, pers. comm.), and Clear Lake Reservoir, California (Coots 1965, Koch *et al.* 1975). Additionally, shortnose suckers have been collected from Lake of the Woods, Oregon (Andreassen 1975a). The Lost River sucker also was known from

Sheepy Lake, Lower Klamath Lake and Tule Lake in California (Coots 1965).

The population of shortnose suckers in Copco Reservoir may have resulted from drift of individuals downstream in the Klamath River from Upper Klamath Lake. Specimens of shortnose suckers collected from Copco Reservoir in 1962, 1978 and 1979 were introgressed with the Klamath smallscale sucker (*Catostomus rimiculus*) (Miller and Smith 1981). Nonetheless, Miller and Smith (1981) regarded the Copco Reservoir population as consisting of "relatively intact gene pool of *Chasmistes brevirostris*." A few shortnose suckers have recently been collected from Boyle Reservoir, located along the Klamath River between Upper Klamath Lake and Copco Reservoir. The status of this population, which appears quite small, is uncertain. The remaining populations of shortnose suckers have not fared as well. The Lake of the Woods population was lost in 1952 during a fish eradication program aimed at removing carp and perch from the lake (Andreassen 1975a). The Clear Lake Reservoir population of shortnose suckers shows evidence of extensive hybridization and repeated backcrossing with the Klamath largescale sucker (*Catostomus snyderi*) (Williams *et al.* 1985). Unlike the population of suckers in Copco Reservoir where debate exists concerning the extent of hybridization, the Clear Lake Reservoir population is not considered to be true-breeding or to consist of a relatively intact gene pool.

Like the shortnose sucker, the population of Lost River suckers in Copco Reservoir may have resulted from downstream drift of individuals from Upper Klamath Lake. The species also may exist just downstream from Copco in Iron Gate Reservoir (California Department of Fish and Game 1980). A few individuals have been collected from Boyle Reservoir in the Klamath River between Upper Klamath Lake and Copco Reservoir (Jeff S. Ziller, pers. comm.). Populations of Lost River suckers in Sheepy Lake, Lower Klamath Lake and Tule Lake were lost after 1924, when the lakes were drained for farming (Moyle 1976). Prior to 1924, large numbers of Lost River suckers were taken from Sheepy Creek, the spawning stream tributary to Sheepy Lake, for human consumption and livestock feed (Coots 1965). The Clear Lake Reservoir population of Lost River suckers is the last remnant of the species in the Lost River system. The population in Clear Lake Reservoir is small and suffers from large numbers of exotic species and lack

of sufficient spawning area (Koch *et al.* 1975).

The primary factors in the widespread decline of the shortnose sucker and Lost River suckers have included damming of rivers, instream flow diversion, draining of marshes and other forms of water manipulation. Dams have been particularly destructive in that they have blocked spawning runs of the fish and facilitated hybridization with other types of suckers in the dam's tailwaters. Although the construction of large reservoirs may provide suitable feeding and resting habitat for these lacustrine species, the reservoirs often lack large inflowing rivers that are necessary for successful spawning. Such in the case in Clear Lake Reservoir, for example, where a small intermittent creek is the only habitat that remains for spawning attempts.

Survey work performed in 1984-1986 by the Oregon Department of Fish and Wildlife, The Klamath Tribe, and the Service have shown drastic declines in the largest remaining population of both species in Upper Klamath Lake. During the 1984 survey, the population of shortnose suckers moving out of Upper Klamath Lake in the spawning run was estimated at 2,650 individuals. The 1985 and 1986 surveys found too few shortnose suckers to accurately estimate the population size. The catch per unit effort of shortnose suckers declined 34 percent between the 1984 and 1985 spawning runs. In 1986, catch per effort statistics yielded 74 percent decrease in the spawning run when compared to 1985. Although the population levels of the Lost River sucker have remained substantially above those critically low levels observed for the shortnose, the overall decline has been equally precipitous. In 1984, a population of 23,123 Lost River suckers was estimated in the Upper Klamath Lake spawning run. By the 1985 spawning run, the population had declined to 11,861 (Bienz 1986). Although the shortnose sucker and Lost River sucker are long-lived (up to at least 43 years in the latter species), the drastic decline can be explained by lack of successful spawning. No significant recruitment of young into the populations has occurred for approximately 18 years (Scoppettone 1986).

The Service included both the Lost River and shortnose suckers in category 2 of its December 30, 1982, comprehensive notice of review (47 FR 58954) of vertebrate species under consideration for listing as endangered or threatened. Category 2 includes those species for which information indicates that proposing to list as endangered or

threatened is possibly appropriate but for which additional data are needed. These two suckers were maintained in the September 18, 1985, update (50 FR 37957) of the 1982 notice. Additional information that has since been provided to the Service indicates that listing is now appropriate.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the shortnose sucker (*Casmistes brevirostris*) and Lost River sucker (*Deltistes luxatus*) are as follows:

##### A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Initial biological surveys of the Klamath Basin indicated the presence of large populations of fishes, and suckers in particular (Cope 1879, Gilbert 1898). Spawning runs of suckers from Upper Klamath Lake were large enough to provide a major food source for Indians and local settlers. The shortnose sucker and Lost River sucker were staples in the diet of the Klamath Indians for thousands of years (Charles E. Kimbol, pers. comm.). Even through the 1960's and 1970's, runs of suckers moving from Upper Klamath Lake up into the Williamson and Sprague Rivers were great enough to provide a major sport fishery that annually attracted many (John Fortune, pers. comm.). The primary species was the larger Lost River sucker, locally known as mullet, but significant numbers of shortnose suckers also occurred in the runs. During the past three years, however, the Klamath Tribe and local biologists have been so alarmed by the population decline of both suckers that the Oregon Department of Fish and Wildlife has recommended a closed season for the 1987 sport fishery.

Causes of the declines are varied and not fully understood. Clearly, there has been a drastic reduction in spawning success. Recent data show that neither species of sucker has successfully spawned for approximately 18 years (Scoppettone 1986). Most of the spawning habitat for the shortnose sucker and Lost River sucker has been lost. The primary factor may have been

the construction of the Sprague River Dam at Chiloquin, Oregon. The dam is located just upstream of the junction of the Sprague and Williamson Rivers and probably eliminated more than 95 percent of the historical spawning habitat. Neither the shortnose sucker or Lost River sucker spawn in the Williamson River upstream of its confluence with the Sprague. Fish ladders have been constructed at various times on the Sprague River Dam but their effectiveness in facilitating movement of suckers around the structure has been minimal to non-existent because, although these suckers are strong-swimmers, their leaping ability is greatly limited. Any successfully-spawned larvae may be diverted into agricultural fields by unscreened irrigation pumps and diversions. Minor secondary spawning occurred in the larger springs that flow from along the shores of Upper Klamath Lake. However, the usefulness of these spawning areas was lost when a railroad was constructed along the east shore of the lake and riprap was used to fill in the springs. Further problems may have been caused by decreases in water quality that result from timber harvest, removal of riparian vegetation and livestock grazing.

#### *B. Overutilization For Commercial, Recreational, Scientific, or Educational Purposes*

In past years, Oregon State law has allowed a snag fishery for the Lost River sucker. The shortnose sucker is incidentally taken each spring during its spawning runs by sport fishermen snagging the larger Lost River sucker. Approximately 1.3 percent of the shortnose suckers in the spawning run were taken in the 1984 sport fishing season (Bienz 1986). The take of Lost River suckers was greater, with a 5 percent exploitation rate in 1984 and 5.3 percent in 1985 (Bienz 1986). With normal population sizes, some recreational take of the shortnose sucker and Lost River sucker is acceptable and even may be beneficial because creel censuses provide valuable life history data on the species. Under the greatly reduced population levels now existing, however, any recreational take is detrimental. No commercial take is known. There is no evidence to suggest that collection for scientific or educational factors is significant. It should be noted that nearly all scientific data have been obtained from fish collected in natural die-offs (see Factor E, below), or during sport fishing.

#### *C. Disease or Predation*

Exotic fishes have been stocked into the Klamath Basin and may have played some role in the decline of the shortnose sucker and Lost River sucker. Such exotic species can serve as sources of parasites and/or diseases.

#### *D. The Inadequacy of Existing Regulatory Mechanisms*

Oregon state law requires collection permits to obtain specimens of either species for scientific or educational purposes. Although Oregon state law has allowed recreational take of these species in the past, the Oregon Department of Fish and Wildlife has proposed a closed season to the Fish and Game Commission. Regardless, sufficient State laws do not exist to protect the habitat. California State law lists the shortnose sucker and Lost River sucker as endangered. However, the only potentially viable California populations, in Copco Reservoir, are located near the border and probably utilize Oregon waters for spawning.

#### *E. Other Natural or Manmade Factors Affecting Its Continued Existence*

Hybridization with the Klamath largescale and Klamath smallscale suckers has been recognized as a problem in maintaining the genetic purity of shortnose sucker populations (Miller and Smith 1981, Williams *et al.* 1985). Similarly, hybridization between the Klamath largescale sucker and Lost River sucker has been reported in Upper Klamath Lake (Andreassen 1975a). Although hybridization occurs naturally between many species of suckers (family Catostomidae), increased incidence of hybridization occurs if one of the parental species experience a major population decline, as in the case of the shortnose sucker. Further hybridization is facilitated by dams that block spawning runs and force individuals of closely related species to spawn in mass in the dam's tailwaters. Spawning of the shortnose, Lost River and Klamath largescale sucker occurs below the Sprague River Dam at Chiloquin.

An additional source of mortality is late-summer die-offs in Upper Klamath Lake. A major die-off of Lost River shortnose suckers was observed during 1986 that resulted from blue-green algal blooms (genus *Aphanizomenon*) (Scoppettone 1986). Sucker die-offs do not occur every year, but may occur in dry or particularly hot years. Pollution of the lake and decrease summer inflows, perhaps caused by diversion of water for the agricultural purposes, aggravate this phenomenon.

The presence of exotics, such as fathead minnows (*Pimephales promelas*) and yellow perch (*Perca flavescens*), may inhibit recovery. Fathead minnows were first documented in the Klamath River system during 1974 and have now spread into Upper Klamath Lake, where they have become abundant (Andreassen 1975b; Jeff S. Ziller, pers. comm.). The minnows may compete with the native suckers for food. Perhaps in response to the increased number of fathead minnows, the yellow perch population in Upper Klamath Lake has increased recently (Jeff S. Ziller, pers. comm.). The perch are potential predators on young suckers. Exotic fishes in the Lost River system include bullheads (*Ictalurus* spp.), largemouth bass (*Micropterus salmoides*) crappie (*Pomoxis* sp.) green sunfish (*Lepomis cyanellus*), rainbow trout (*Salmo gairdneri*), and Sacramento perch (*Archoplites interruptus*) (Koch *et al.* 1975; Jack E. Williams, pers. obs.).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in determining to propose this rule. Based on this evaluation, the preferred action is to list the shortnose sucker and Lost River sucker as endangered. This action is warranted because of the reduced distribution and numbers of these species. Where the shortnose sucker and Lost River sucker remain, the populations are declining rapidly with no substantial recruitment of young into the populations for the past 18 years. In addition to stopping any additional losses, extensive research and initiation of recovery actions are necessary to prevent extinction within the immediate future.

#### *Critical Habitat*

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrent with the determination that a species is endangered or threatened.

The Service finds that designation of critical habitat for the shortnose sucker and Lost River sucker is not prudent at this time. As noted in factor "A" of the above "Summary of Factors Affecting the Species", much of the historic spawning habitat is not now accessible to either species because of a dam blocking the spawning migrations from Upper Klamath Lake. Therefore, determining the boundaries of areas to be included as critical habitat is difficult. Further, agency personnel are well-aware of the presence of both species through the Klamath Basin

Sucker Interagency Working Group. Little additional benefits of notification of the species presence would be achieved through critical habitat designation. Because of these factors, the Service finds not net benefit from proposing critical habitat at this time. If spawning grounds are more clearly identified, critical habitat may be proposed at such time.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part below.

Section 7(a) of the Act, as amended requires Federal agencies to evaluate their actions with respect to any species which is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Federal actions that may affect the shortnose sucker and Lost River sucker are issuances of licenses for dam projects by the Federal Energy Regulatory Commission; grazing or timber harvesting practices of the Forest Service along Upper Klamath Lake and the Sprague River; and agreements, leases or other arrangements between

The Klamath Tribe and local irrigation interests that would result in the diversion of water from the Williamson or Sprague Rivers. Permitting activities of the Army Corps of Engineers pursuant to section 404 of the Clean Water Act or section 10 of the River and Harbor Act may be affected, although no known permits are pending in the subject area.

Recovery activities that may be initiated include: Maintain or improve spawning habitat in streams, reduce nutrient inflow into lake habitat to improve water quality, reduce algal blooms and increase level of dissolved oxygen, obtain pure stock for captive propagation and reintroduction, and conduct research to determine what would facilitate the successful movement of these fish around existing and planned dams since passage of fish over the existing fish ladders is questionable.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

#### Public Comments Solicited

The Service intends that any final action resulting from this proposal will be accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or the lack thereof) to these species;

(2) The location of any additional populations of these species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range and distribution of these species;

(4) Current or planned activities in the subject area and their possible impacts on these species; and

Final promulgation of the regulations on these species will take into consideration the comments any and additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Request must be filed within 45 days of the date of the proposal. Such requests should be made in writing and addressed to the Regional Director (FWE-SE), U.S. Fish and Wildlife Service, 500 NE. Multnomah Street, Suite 1692, Portland, Oregon 97232.

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

#### References Cited

- Andreasen, J.K. 1975a. Systematics and status of the family Catostomidae in southern Oregon, Ph.D. Dissertation. Oregon State Univ. 76 pp.
- Andreasen, J.K. 1975b. Occurrence of the fathead minnow, *Pimephales promelas*, in Oregon. California Fish and Game 61:155-156.
- Bienz, C.S. 1986. Untitled report on Klamath Basin suckers survey results, 1984-1985. The Klamath Tribe. Unpublished. 8 pp.
- California Department of Fish and Game. 1980. At the crossroads, report on the status of California's endangered and rare fish and wildlife. Resources Agency, Sacramento. 147 pp.
- Coots, M. 1965. Occurrences of the Lost River sucker, *Deltistes luxatus* (Cope), and shortnose sucker, *Chasmistes brevirostris* (Cope), in northern California. California Fish and Game 51:68-73.

- Cope, E.D. 1879. The fishes of Klamath Lake, Oregon. Am. Nat. 13:784-785.
- Evermann, B.W. and S.E. Meek. 1898. A report upon salmon investigations in the Columbia River basin and elsewhere on the Pacific Coast in 1896. Bull. U.S. Fish Comm. 17(for 1897):15-84.
- Gilbert, C.H. 1898. The fishes of the Klamath River basin. Bull. U.S. Fish Comm. 17(for 1897):1-13.
- Koch, D.L., J.J. Cooper, G.P. Contreras, and V. King. 1975. Survey of the fishes of the Clear Lake Reservoir drainage. Center for Water Resources Res., Desert Res. Inst. Reno, Nevada Proj. Rept. 37. 33 pp.
- Miller, R.R. and G.R. Smith. 1981. Distribution and evolution of *Chasmistes* (Pisces: Catostomidae) in western North America. Occ. Pap. Mus. Zool. Univ. Michigan 696:1-46.
- Moyle, P.B. 1976. Inland fishes of California. Univ. California Press, Berkeley. 405 pp.
- Scoppettone, G.G. 1986. Upper Klamath Lake, Oregon, catostomid research. U.S. Fish and Wildlife Service Report, Reno, Nevada. 14 pp.

- Seale, A. 1896. Note on *Deltistes*, a new genus of catostomid fishes. Proc. California Acad. Sci. 6:269.
- Williams, J.E., D.B. Bowman, J.E. Brooks, A.A. Echelle, R.J. Edwards, D.A. Hendrickson, and J.J. Landye. 1985. Endangered aquatic ecosystems in North American deserts with list of vanishing fishes of the region. J. Arizona-Nevada Acad. Sci. 20:1-62.

#### Author

The primary author of this proposed rule is Dr. Jack E. Williams, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room E-1823, Sacramento, California 95825 (telephone 916/978-4866; FTS 460-4866).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Proposed Regulations Promulgation

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

#### PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884, Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*)

2. It is proposed to amend § 17.11(h), by adding the following, in alphabetical order under "Fishes", to the List of Endangered and Threatened Wildlife:

#### § 17.11 Endangered and threatened wildlife.

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(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Sucker, Lost River .....	<i>Deltistes luxatus</i> .....	U.S.A. (OR, CA) .....	Entire .....	E .....	.....	N/A	N/A
Sucker, Shortnose .....	<i>Chasmistes brevirostris</i> .....	U.S.A. (OR, CA) .....	Entire .....	E .....	.....	N/A	N/A

Dated: August 13, 1987.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

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